RS/6000 7043-240 System Firmware Update

Applies to : IBM RS/6000 7043-240

Contents

1.0 Systems Affected

This update provides new System firmware (FW) for RS/6000 7043-240 systems *only*. Do **not** use on any other systems.

The typical time to install this firmware is 0.7 hours. As part of the firmware installation, the system is rebooted. The reboot time will vary depending on the features installed, the amount of drawers attached, etc. This estimate is for a typical system. The reboot could run as high as 1.0 hours for a very complex system.

The firmware level contained in this update is:

- **System FW: DOR02311**

2.0 Firmware Description and Revision History

Table 2.1 lists the levels and descriptions for System firmware.

Table 2.1: System Firmware Update Descriptions and History	
DOR02311	• Added support for system restore using mksysb created on CD media.

	• Corrected wrong output returned by the uname -m command. • Corrected NIM boot failure on 100Mb Ethernet adapters when installed on secondary PCI busses.
DOR01150	• Corrected for NIM boot/install failures through ethernet adapters.
DOR01080	• Corrected F05 hang with dual 166MHz Processors.
DOR00039	• Correction for possible system hang when high DMA activity ocurrs.
DOR99190	• Correction for SCSI timeout window too short
DOR98153	• Added Network Boot support for SysKonnect SK-Net-FDDI-PCI 100MB/S Adapter • Miscellaneous minor enhancements and fixes
DOR97251	• Added support for 3COM Ethernet-Fast, 10/100BaseT PCI LAN Adapter • Corrected Time of Day Drive Problem
DOR97112	• Added support for Dynamic Host Configuration Protocol (DHCP) • Corrected console selection to prevent blank screen / no icons • Miscellaneous fixes
DOR97069	• Added support for additional network function • Added support for 256Meg Memory.
DOR97010	• Added support for new features and function • Miscellaneous enhancements and fixes
DOR96320	• Miscellaneous enhancements and fixes
DOR96261	• Preliminary GA System FW level.

3.0 Cautions and Important Notes

Don't be alarmed at the length of this document! For any given download/unpacking/update environment, the process is short. This document describes processes for several environments. One should be suitable for your needs, and these instructions guide you through just the environment you choose.

Avoid Potential Firmware Update Corruption

Some firmware corruptions are recoverable in the field, and a recovery attempt will usually succeed. If your recovery attempt fails, replace the card containing the corrupted firmware module. Here are some tips to help avoid the need for such recoveries.

Never power off the system during the firmware update process!
The update will be incomplete and *will* fail. Depending on where in the update process the power was lost, a recovery attempt will often succeed. One recovery attempt is worthwhile.

Replacement Parts May Require Updating

When a system planar is replaced, the System firmware on the new system planar must be checked to ensure it is at the latest level. If it is not, update to the latest level. Table 3.1 lists the released levels.

Table 3.1: System Firmware Levels, File Sizes and Checksums			
Distribution Date	*Filename*	*Size*	*Checksum*
January	DOR02311.img	1048576	24010
July 2001	DOR01150.img	1048576	44171
April 2001	DOR01080.img	1048576	56508
December 2000	DOR00039.img	1048576	61009
September 1999	DOR99190.img	1048576	52334
June 1998	DOR98153.img	1048576	16121
October 1997	DOR97251.img	1048576	36693
May 1997	DOR97112.img	1048576	40436
March 1997	DOR97069.img	1048576	35506
February 1997	DOR97010.img	1048576	25395
December 1996	DOR96320.img	1048576	n/a

Original (GA)	DOR96261.img	1048576	59214

Note: Checksums can be used to verify files have not been corrupted or altered during transmission.

The checksum can be computed for any file by using the AIX '**sum**' command, as follows.

At the AIX command line, enter:

 sum *{filename}*

Example: Calculate the checksum of a file, 'DOR02311.img'.

You will enter ----------------> **sum DOR02311.img**

The output will look like this -------> 24010   1024   DOR02311.img

The checksum is --------------> 24010

AIX Instructions are CASE SENSITIVE

In the instructions that follow are specific AIX and DOS commands. AIX commands are CASE (lower and upper) SENSITIVE, and *must* be entered exactly as shown, including the filenames. DOS commands are not case sensitive, and may be entered without regard to the cases shown.

How to Determine the Firmware Release Date from the File Name

Level identifiers for the System FW use the 5-digit Julian date code method in terms of day number in a year (such as 02311 for DOR02311 level -- 311th day of 2002 or November 7, 2002).

4.0 How to Determine Currently Installed Firmware Level

DO NOT rely on the part number or firmware level marking/label on the EPROM/FLASH module because the content of the module may have been updated to a different level. To be safe, always check the firmware level electronically.

4.1 Using SMS Utilities to Read Currently Installed Firmware Level

The System Management Services (SMS) Utilities may be accessed in two ways.

Instructions for these two methods are slightly different, so be sure to choose the correct instructions for your environment.

4.1.1 If Using an ASCII Terminal

Power on or shutdown and restart the system. At checkpoint FF1 on the operator panel, watch the terminal for the time to press the "1" key. An indicator appears on the terminal as each system component is self-tested. When the word "keyboard" appears, quickly press the "1" key. The SMS menu will be displayed after startup testing has completed.

The current System FW level can be found in the top left hand corner of the display. You will see something similar to:

    RS/6000 Firmware
    Version DOR01150

When you have read the current FW level, you may exit SMS as directed on the menu screens.

The Version line lists the level of your currently installed System Firmware. If the right most five characters (date) of the firmware level are earlier than 02311 you should consider installing the update.

If you find the firmware level must be updated, proceed to Section 5.0.   If no update is needed,, the installation is complete.

4.1.2 If Using a Graphics Console

Power on or shutdown and restart the system. At checkpoint FF1 on the operator panel, in the bottom right hand corner of the display, you will see copyright notices and the last line will say something similar to:

  Firmware Version DOR01150

The Version line lists the level of your currently installed System Firmware. If the right most five characters (date) of the firmware level are earlier than 02311 you should consider installing the update.

  If you find the firmware level must be updated, proceed to Section 5.0.   If no update is needed, the installation is complete.

5.0 Downloading and Unpacking the Firmware Update Package

Instructions for downloading and unpacking the firmware update package follow.

5.1 Internet Package

The System Firmware, in AIX and DOS packages, is located at the web site

    http://www14.software.ibm.com/webapp/set2/firmware/gjsn

Follow the instructions on this web page. You must read and agree to the license agreement to obtain the firmware package.

In the drop-down box, choose the entry for your specific machine type and model.

The download choices at that entry are:

- Desc   (Instructions document)
- AIX   (For downloading to an AIX system)
- DOS   (For downloading to Windows workstation)

You will want a copy of the instructions document and one of the download choices. You may transfer files to the target system in one of several ways.

- By downloading files to an AIX system and then using diskettes for transferring to the target system.
- By downloading files to a Windows workstation from which you will use diskettes for transferring to the target system.

Detailed download/unpacking instructions follow for each of the downloading preferences.

- If using an AIX system for downloading, continue to paragraph 5.1.1.
- If using a Windows workstation for downloading, skip to paragraph 5.1.2.

5.1.1 Downloading the AIX Package

Use this method to download to an AIX system.

> **Note:** In the instructions that follow are specific AIX commands.
>
> AIX commands are CASE (lower and upper) SENSITIVE, and *must* be entered exactly as shown, including the filenames.

a) Provide a directory on an AIX system to receive the AIX package.

Enter:
mkdir /tmp/fwupdate

Note: If the directory /tmp/fwupdate already exists,
        make sure it is empty before proceeding.

b) Transfer the AIX package to the /tmp/fwupdate directory (using "Save as ...").
   You'll see that the filename is 7043240I.BIN

c) Unpack the file by executing the instructions below.

Enter the commands:

cd   /tmp/fwupdate
chmod   +x   7043240I.BIN
./7043240I.BIN

[Don't overlook the periods (.) in the above command.]

This file will be added to /tmp/fwupdate.

DOR02311.img

Note: The following procedure requires the **doswrite** command, which
        is included in bos.dosutil (an installation option of AIX). If

this is not loaded on your machine, see your system administrator.

A 2MB (HD) new or freshly formatted DOS diskette is required.

With the diskette loaded in the drive,

Enter the commands:

cd /tmp/fwupdate
doswrite DOR02311.img DOR02311.img

Label theis diskette,

"Image: System (DOR02311) FW for IBM 7043-240".

Proceed to <u>Section 6.0, Updating the Firmware</u>.

5.1.2 Downloading the DOS Package

Use this method to download to a Windows workstation.

a) Prepare a directory for receiving the DOS package.
This directory can be in any partition with 3MB available space.
Executing in such a partition, called [path] in these instructions
(ex. c:\download),

Enter:
md [path]**\fwupdate**

Note: If the directory [path]\fwupdate already exists,
make sure it is empty before proceeding.

b) Transfer the DOS package to the [path]\fwupdate directory (using "Save as ...").
You'll see the filename is 7043240I.EXE

c) Unpack the file by executing the instructions below.

Enter the commands:

cd [path]**\fwupdate**
7043240I

This file will be added to the fwupdate subdirectory:

DOR02311.img

d) A 2MB (HD) new or freshly formatted DOS diskette is required.

With the diskette loaded in the drive,

Enter the commands:

cd [path]**\fwupdate**
copy DOR02311.img a:

Label the resulting diskette,

"Image: System (DOR02311) FW for IBM 7043-240"

Proceed to <u>Section 6.0, Updating the Firmware</u>.

6.0 Updating the Firmware

This section describes the method for installing the new firmware.

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WARNING:

Do not power off the target system at any time before the update process completes.
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6.1 Using the SMS Utilities Method

The System Management Services (SMS) Utilities may be accessed in two ways.

- If using an ASCII terminal, continue to paragraph 6.1.1.
- If using a graphics console, skip to paragraph 6.1.2.

Instructions for these two methods are slightly different, so be sure to choose the correct instructions for your environment.

6.1.1 If Using an ASCII Terminal

   a. Power on or shutdown and restart the system.

   b. At checkpoint FF1 on the operator panel, watch the terminal for the time to press the "1" key.
      An indicator appears on the terminal as each system component is self-tested. When the word
      "keyboard" appears, quickly press the "1" key. The SMS menu will appear when the startup
       tests have completed.

   c. Choose 3 for Utilities.

   d. Choose 6 for Update System Firmware.

   e. Insert diskette labeled "Image: System (DOR02311) FW for IBM 7043-240" in the drive.

   f. Follow on-screen update steps as they are presented.

The flash update should complete in about one minute.

Following a successful firmware update, the system will say to press ENTER to cause a reboot.   Press ENTER at this time.

Don't forget to retrieve and file any firmware update diskette that may still be in the system's diskette drive. A good time to do this is after the reboot has completed.

Your firmware update is complete. You will want to verify this update as shown in paragraph 6.2.

6.1.2 If Using a Graphics Console

   a. Power on or shutdown and restart the system.

b. At checkpoint FF1 on the operator panel, watch the console for the time to press the "F1" key.

An indicator appears on the console as each system component is self-tested. When the keyboard icon appears, quickly press the "F1" key. The SMS menu will appear when the startup tests have completed.

c. Use arrow keys to move to Utilities. <ENTER>

d. Use arrow keys to move to Update. <ENTER>

e. Insert diskette labeled "Image: System (DOR02311) FW for IBM 7043-240" in the drive. <ENTER>

f. Use arrow keys to move to YES if the image filename displayed is correct.

g. Follow on-screen update steps as they are presented.

The flash update should complete in about one minute.

Following a successful firmware update, the system will automatically reboot after the update is complete.

Don't forget to retrieve and file any firmware update diskette that may still be in the system's diskette drive. A good time to do this is after the reboot has completed.

Your firmware update is complete. You will want to verify this update as shown in paragraph 6.2.

6.2 Verifying the Updates

To verify the update, you must use the SMS Utilities, which may be accessed in two ways.

- If using an ASCII terminal, continue to paragraph 6.2.1.
- If using a graphics console, skip to paragraph 6.2.2.

Instructions for these two methods are slightly different, so be sure to choose the correct instructions for your environment.

6.2.1 If Using an ASCII Terminal

Power on or shutdown and restart the system. At checkpoint FF1 on the operator panel, watch the terminal for the time to press the "1" key. An indicator appears on the terminal as each system component is self-tested. When the word "keyboard" appears, quickly press the "1" key. The SMS menu will be displayed after startup testing has completed.

The current System FW levels can be found in the top left hand corner of the display. You will see something similar to:

    RS/6000 Firmware
    Version DOR02311

The rightmost five characters (date) of the version should match the level you just installed, namely, 02311.

6.2.2 If Using a Graphics Console

Power on or shutdown and restart the system. At checkpoint FF1 on the operator panel, in the bottom right hand corner of the display, you will see copyright notices and the last line will say something similar to:

  Firmware Version DOR02311

The rightmost five characters (date) of the version should match the level you just installed, namely, 02311.

6.3 Archiving the Update Files

In the event it becomes necessary to restore your system to a certain firmware level, it is suggested you identify and archive the materials for each update you install.

If the download process produced diskettes, label and store them in a safe place.

If the download process produced files, archive and identify the file for convenient retrieval.

End of Installation Instructions